



**STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL  
Lab Services - Jackson Regional Lab  
Jackson, TN 38301  
731-426-0686

TDH: Lab Services KRL  
Lab Services - Knoxville Regional Lab  
Knoxville, TN 37920  
865-549-5201

TDH: Lab Services NCL  
Lab Services - Nashville Central Lab  
Nashville, TN 37243  
615-262-6300

**Sent To:** Greg Denton  
TDEC-WPC  
6th Floor, L & C Tower Annex  
401 Church Street  
Nashville, TN 37243-1534

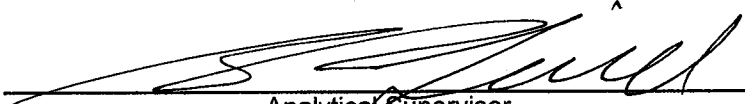
Michael Atchley  
TDEC-WPC  
Knoxville FO  
3711 Middlebrook Pike  
Knoxville, TN 37921

**Lab ID:** K00002313  
Knoxville Regional Laboratory

**Sampling Agency:** TDEC: Division of Water Pollution Control

**Billing Code:** 327.34-20

This is to certify that the following results were determined using  
good laboratory practices and in accordance with federal or state  
approved methodologies.

  
Analytical Supervisor

**Lab-Sample Number:** K00002313001  
**Project Name:**  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 04/23/2009 10:02  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**

**pH:** 7.85 pH Units  
**Chlorine, residual:**  
**Conductivity:** 44 uMHO  
**Temperature:** 13.62  
**Dissolved Oxygen:** 10.32 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	11	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	12	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002313002

Project Name:

Sample Description: Emory River mile 2.1

Sampler Project Name: TVA Ash Spill

Project Site No.: 2

Station No.: EMORY002.1RO

Date/Time Collected: 04/23/2009 11:02

Sampler's Name: Geoff Klein

County: ROANE - 73

Sample Matrix: Water

EFO: Knoxville

Sampling Agency: TDEC-WPC

Billing Code: 327.34-20

Send Report To: TDEC-WPC

Agency Invoiced: TDEC-WPC

Priority Date:

Date/Time Received: 04/23/2009 14:40

Received By: E McCrary

**Field Determinations**

pH: 7.45 pH Units

Chlorine, residual: 48 uMHO

Conductivity: 48

Temperature: 14.03

Dissolved Oxygen: 10.25 mg/L

Other:

Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	14	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	15	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	28	mg/L	10	10	A Peebles	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002313003

Project Name:

Sample Description: Approx 100' downstream from middle dredge pc

Sampler Project Name: TVA Ash Spill

Project Site No.: 2A

Station No.: Dredge Plume

Date/Time Collected: 04/23/2009 11:10

Sampler's Name: Geoff Klein

County: ROANE - 73

Sample Matrix: Water

EFO: Knoxville

Sampling Agency: TDEC-WPC

Billing Code: 327.34-20

Send Report To: TDEC-WPC

Agency Invoiced: TDEC-WPC

Priority Date:

Date/Time Received: 04/23/2009 14:40

Received By: E McCrary

**Field Determinations**

pH: 7.24 pH Units

Chlorine, residual: 45 uMHO

Conductivity: 13.53

Temperature: 10.64 mg/L

Dissolved Oxygen: 10.64

Other:

Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	13	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	13	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002313004  
**Project Name:**  
**Sample Description:** Emory River mile 1.9 at underwater weir  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2B  
**Station No.:** EMORY001.9RO  
**Date/Time Collected:** 04/23/2009 11:28  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.22 pH Units  
**Chlorine, residual:**  
**Conductivity:** 45 uMHO  
**Temperature:** 13.48  
**Dissolved Oxygen:** 10.70 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	13	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	14	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	4/24/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

Lab-Sample Number: K00002313005

Project Name:

Sample Description: Emory River mile 1.7

Sampler Project Name: TVA Ash Spill

Project Site No.: 3

Station No.: EMORY001.7RO

Date/Time Collected: 04/23/2009 11:39

Sampler's Name: Geoff Klein

County: ROANE - 73

Sample Matrix: Water

EFO: Knoxville

Sampling Agency: TDEC-WPC

Billing Code: 327.34-20

Send Report To: TDEC-WPC

Agency Invoiced: TDEC-WPC

Priority Date:

Date/Time Received: 04/23/2009 14:40

Received By: E McCrary

**Field Determinations**

pH: 7.24 pH Units

Chlorine, residual:

Conductivity: 44 uMHO

Temperature: 13.13

Dissolved Oxygen: 10.58 mg/L

Other:

Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	13	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	14	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	11	mg/L	10	10	A Peoples	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002313006  
**Project Name:**  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 04/23/2009 11:48  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.26 pH Units  
**Chlorine, residual:**  
**Conductivity:** 58 uMHO  
**Temperature:** 14.01  
**Dissolved Oxygen:** 10.42 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	14	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	15	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	10	mg/L	10	10	A Peebles	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002313007  
**Project Name:**  
**Sample Description:** Clinch River mile 2.3  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 04/23/2009 12:02  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.85 pH Units  
**Chlorine, residual:**  
**Conductivity:** 163 uMHO  
**Temperature:** 14.73  
**Dissolved Oxygen:** 10.38 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	71	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	59	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	15	mg/L	10	10	A Peeples	4/24/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**



**Lab-Sample Number:** K00002313008  
**Project Name:**  
**Sample Description:** Clinch River TVA Discharge Point  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5A  
**Station No.:** TN0005452 Outfall 002  
**Date/Time Collected:** 04/23/2009 12:09  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.61 pH Units  
**Chlorine, residual:**  
**Conductivity:** 54 uMHO  
**Temperature:** 15.50  
**Dissolved Oxygen:** 10.37 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	15	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	16	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	19	mg/L	10	10	A Peebles	4/24/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

Lab-Sample Number: K00002313009

Project Name:

Sample Description: Clinch River mile 4.5 near Sugar Grove Valley R

Sampler Project Name: TVA Ash Spill

Project Site No.: 6

Station No.: CLINC004.5RO

Date/Time Collected: 04/23/2009 12:21

Sampler's Name: Geoff Klein

County: ROANE - 73

Sample Matrix: Water

EFO: Knoxville

Sampling Agency: TDEC-WPC

Billing Code: 327.34-20

Send Report To: TDEC-WPC

Agency Invoiced: TDEC-WPC

Priority Date:

Date/Time Received: 04/23/2009 14:40

Received By: E McCrary

**Field Determinations**

pH: 8.08 pH Units

Chlorine, residual:

Conductivity: 222 uMHO

Temperature: 14.94

Dissolved Oxygen: 10.61 mg/L

Other:

Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	100	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	85	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	10	mg/L	10	10	A Peebles	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected



**STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES**

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Lab Services - Nashville Central Lab  
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615-262-6300

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Nashville, TN 37243-1534

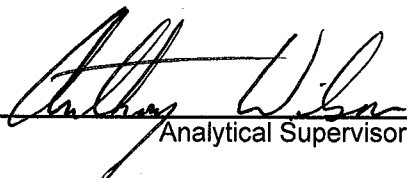
Michael Atchley  
TDEC-WPC  
Knoxville FO  
3711 Middlebrook Pike  
Knoxville, TN 37921

**Lab ID:** K00002313  
Knoxville Regional Laboratory

**Sampling Agency:** TDEC: Division of Water Pollution Control

**Billing Code:** 327.34-20

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.

  
Analytical Supervisor

**Lab-Sample Number:** K00002313001  
**Project Name:**  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 04/23/2009 10:02  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.85 pH Units  
**Chlorine, residual:**  
**Conductivity:** 44 uMHO  
**Temperature:** 13.62  
**Dissolved Oxygen:** 10.32 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	150	µg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	110	µg/L	6.4	10	08242	4/29/2009
Antimony	U	µg/L	0.33	1	08242	4/28/2009
Arsenic	U	µg/L	0.93	5	08242	4/28/2009
Barium	22	µg/L	2.5	5	08242	4/28/2009
Beryllium	U	µg/L	0.11	1	08242	4/28/2009
Cadmium	U	µg/L	0.41	1	08242	4/28/2009
Chromium	U	µg/L	2.0	5	08242	4/28/2009
Cobalt	0.31J	µg/L	0.04	1	08242	4/28/2009
Copper	U	µg/L	0.38	1	08242	4/28/2009
Lead	0.19J	µg/L	0.10	1	08242	4/28/2009
Manganese	29	µg/L	0.42	1	08242	4/28/2009
Nickel	1.0	µg/L	0.25	1	08242	4/28/2009
Selenium	U	µg/L	1.3	5	08242	4/28/2009
Silver	0.05J	µg/L	0.03	0.25	08242	4/28/2009
Thallium	0.65J	µg/L	0.03	1	08242	4/28/2009
Vanadium	U	µg/L	3.4	5	08242	4/28/2009
Zinc	3.4J	µg/L	1.9	5	08242	4/28/2009

**Lab-Sample Number:** K00002313001  
**Project Name:**  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 04/23/2009 10:02  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.85 pH Units  
**Chlorine, residual:**  
**Conductivity:** 44 uMHO  
**Temperature:** 13.62  
**Dissolved Oxygen:** 10.32 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.051J	µg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL  
MDL - Method Detection Limit  
MQL - Method Quantitation Limit  
U - Undetected

**Lab-Sample Number:** K00002313002  
**Project Name:**  
**Sample Description:** Emory River mile 2.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 04/23/2009 11:02  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.45 pH Units  
**Chlorine, residual:**  
**Conductivity:** 48 uMHO  
**Temperature:** 14.03  
**Dissolved Oxygen:** 10.25 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	800	µg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	1200	µg/L	12.8	20	M Pattanayek	4/29/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	3.4J	µg/L	0.93	5	M Pattanayek	4/28/2009
Barium	47	µg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	0.22J	µg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.98J	µg/L	0.04	1	M Pattanayek	4/28/2009
Copper	1.6	µg/L	0.38	1	M Pattanayek	4/28/2009
Lead	1.9	µg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	36	µg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	2.3	µg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.33J	µg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	3.9J	µg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	4.7J	µg/L	1.9	5	M Pattanayek	4/28/2009

Lab-Sample Number: K00002313002  
Project Name:  
Sample Description: Emory River mile 2.1  
Sampler Project Name: TVA Ash Spill  
Project Site No.: 2  
Station No.: EMORY002.1RO  
Date/Time Collected: 04/23/2009 11:02  
Sampler's Name: Geoff Klein  
County: ROANE - 73  
Sample Matrix: Water  
EFO: Knoxville  
Sampling Agency: TDEC-WPC  
Billing Code: 327.34-20  
Send Report To: TDEC-WPC  
Agency Invoiced: TDEC-WPC  
Priority Date:  
Date/Time Received: 04/23/2009 14:40  
Received By: E McCrary

Field Determinations  
pH: 7.45 pH Units  
Chlorine, residual:  
Conductivity: 48 uMHO  
Temperature: 14.03  
Dissolved Oxygen: 10.25 mg/L  
Other:  
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002313003

Project Name:

Sample Description: Approx 100' downstream from middle dredge pc

Sampler Project Name: TVA Ash Spill

Project Site No.: 2A

Station No.: Dredge Plume

Date/Time Collected: 04/23/2009 11:10

Sampler's Name: Geoff Klein

County: ROANE - 73

Sample Matrix: Water

EFO: Knoxville

Sampling Agency: TDEC-WPC

Billing Code: 327.34-20

Send Report To: TDEC-WPC

Agency Invoiced: TDEC-WPC

Priority Date:

Date/Time Received: 04/23/2009 14:40

Received By: E McCrary

Field Determinations

pH: 7.24 pH Units

Chlorine, residual:

Conductivity: 45 uMHO

Temperature: 13.53

Dissolved Oxygen: 10.64 mg/L

Other:

Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	330	µg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	370	µg/L	6.4	10	M Pattanayek	4/29/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	1.0J	µg/L	0.93	5	M Pattanayek	4/28/2009
Barium	28	µg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.38J	µg/L	0.04	1	M Pattanayek	4/28/2009
Copper	1.4	µg/L	0.38	1	M Pattanayek	4/28/2009
Lead	0.55J	µg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	36	µg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	1.3	µg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.16J	µg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	4.2J	µg/L	1.9	5	M Pattanayek	4/28/2009



**Lab-Sample Number:** K00002313003

**Project Name:**

**Sample Description:** Approx 100' downstream from middle dredge pc

**Sampler Project Name:** TVA Ash Spill

**Project Site No.:** 2A

**Station No.:** Dredge Plume

**Date/Time Collected:** 04/23/2009 11:10

**Sampler's Name:** Geoff Klein

**County:** ROANE - 73

**Sample Matrix:** Water

**EFO:** Knoxville

**Sampling Agency:** TDEC-WPC

**Billing Code:** 327.34-20

**Send Report To:** TDEC-WPC

**Agency Invoiced:** TDEC-WPC

**Priority Date:**

**Date/Time Received:** 04/23/2009 14:40

**Received By:** E McCrary

**Field Determinations**

**pH:** 7.24 pH Units

**Chlorine, residual:**

**Conductivity:** 45 uMHO

**Temperature:** 13.53

**Dissolved Oxygen:** 10.64 mg/L

**Other:**

**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.050J	µg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002313004  
**Project Name:**  
**Sample Description:** Emory River mile 1.9 at underwater weir  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2B  
**Station No.:** EMORY001.9RO  
**Date/Time Collected:** 04/23/2009 11:28  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.22 pH Units  
**Chlorine, residual:**  
**Conductivity:** 45 uMHO  
**Temperature:** 13.48  
**Dissolved Oxygen:** 10.70 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	230	µg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	187	µg/L	6.4	10	M Pattanayek	4/28/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	4/28/2009
Barium	24	µg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.28J	µg/L	0.04	1	M Pattanayek	4/28/2009
Copper	0.59J	µg/L	0.38	1	M Pattanayek	4/28/2009
Lead	0.23J	µg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	37	µg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	1.0	µg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.11J	µg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	2.9J	µg/L	1.9	5	M Pattanayek	4/28/2009

**Lab-Sample Number:** K00002313004  
**Project Name:**  
**Sample Description:** Emory River mile 1.9 at underwater weir  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2B  
**Station No.:** EMORY001.9RO  
**Date/Time Collected:** 04/23/2009 11:28  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.22 pH Units  
**Chlorine, residual:**  
**Conductivity:** 45 uMHO  
**Temperature:** 13.48  
**Dissolved Oxygen:** 10.70 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002313005  
**Project Name:**  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 04/23/2009 11:39  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.24 pH Units  
**Chlorine, residual:**  
**Conductivity:** 44 uMHO  
**Temperature:** 13.13  
**Dissolved Oxygen:** 10.58 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	340	µg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	400	µg/L	6.4	10	M Pattanayek	4/29/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	4/28/2009
Barium	29	µg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.39J	µg/L	0.04	1	M Pattanayek	4/28/2009
Copper	U	µg/L	0.38	1	M Pattanayek	4/28/2009
Lead	0.56J	µg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	34	µg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	1.2	µg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.11J	µg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	3.1J	µg/L	1.9	5	M Pattanayek	4/28/2009

Lab-Sample Number: K00002313005  
Project Name:  
Sample Description: Emory River mile 1.7  
Sampler Project Name: TVA Ash Spill  
Project Site No.: 3  
Station No.: EMORY001.7RO  
Date/Time Collected: 04/23/2009 11:39  
Sampler's Name: Geoff Klein  
County: ROANE - 73  
Sample Matrix: Water  
EFO: Knoxville  
Sampling Agency: TDEC-WPC  
Billing Code: 327.34-20  
Send Report To: TDEC-WPC  
Agency Invoiced: TDEC-WPC  
Priority Date:  
Date/Time Received: 04/23/2009 14:40  
Received By: E McCrary

Field Determinations  
pH: 7.24 pH Units  
Chlorine, residual:  
Conductivity: 44 uMHO  
Temperature: 13.13  
Dissolved Oxygen: 10.58 mg/L  
Other:  
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.041J	µg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL  
MDL - Method Detection Limit  
MQL - Method Quantitation Limit  
U - Undetected

**Lab-Sample Number:** K00002313006  
**Project Name:**  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 04/23/2009 11:48  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.26 pH Units  
**Chlorine, residual:**  
**Conductivity:** 58 uMHO  
**Temperature:** 14.01  
**Dissolved Oxygen:** 10.42 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	330	µg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	320	µg/L	6.4	10	M Pattanayek	4/29/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	4/28/2009
Barium	29	µg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.33J	µg/L	0.04	1	M Pattanayek	4/28/2009
Copper	U	µg/L	0.38	1	M Pattanayek	4/28/2009
Lead	0.42J	µg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	35	µg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	1.3	µg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.10J	µg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	3.1J	µg/L	1.9	5	M Pattanayek	4/28/2009

**Lab-Sample Number:** K00002313006  
**Project Name:**  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 04/23/2009 11:48  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.26 pH Units  
**Chlorine, residual:**  
**Conductivity:** 58 uMHO  
**Temperature:** 14.01  
**Dissolved Oxygen:** 10.42 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

Lab-Sample Number: K00002313007

Project Name:

Sample Description: Clinch River mile 2.3

Sampler Project Name: TVA Ash Spill

Project Site No.: 5

Station No.: CLINC002.3RO

Date/Time Collected: 04/23/2009 12:02

Sampler's Name: Geoff Klein

County: ROANE - 73

Sample Matrix: Water

EFO: Knoxville

Sampling Agency: TDEC-WPC

Billing Code: 327.34-20

Send Report To: TDEC-WPC

Agency Invoiced: TDEC-WPC

Priority Date:

Date/Time Received: 04/23/2009 14:40

Received By: E McCrary

Field Determinations

pH: 7.85 pH Units

Chlorine, residual:

Conductivity: 163 uMHO

Temperature: 14.73

Dissolved Oxygen: 10.38 mg/L

Other:

Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	390	µg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	340	µg/L	6.4	10	M Pattanayek	4/29/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	4/28/2009
Barium	33	µg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.36J	µg/L	0.04	1	M Pattanayek	4/28/2009
Copper	1.0	µg/L	0.38	1	M Pattanayek	4/28/2009
Lead	0.49J	µg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	36	µg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	1.8	µg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.09J	µg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	3.7J	µg/L	1.9	5	M Pattanayek	4/28/2009



**Lab-Sample Number:** K00002313007  
**Project Name:**  
**Sample Description:** Clinch River mile 2.3  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 04/23/2009 12:02  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.85 pH Units  
**Chlorine, residual:**  
**Conductivity:** 163 uMHO  
**Temperature:** 14.73  
**Dissolved Oxygen:** 10.38 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.044J	µg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002313008  
**Project Name:**  
**Sample Description:** Clinch River TVA Discharge Point  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5A  
**Station No.:** TN0005452 Outfall 002  
**Date/Time Collected:** 04/23/2009 12:09  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**

**pH:** 7.61 pH Units  
**Chlorine, residual:**  
**Conductivity:** 54 uMHO  
**Temperature:** 15.50  
**Dissolved Oxygen:** 10.37 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	510	µg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	660	µg/L	6.4	10	M Pattanayek	4/29/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	2.8J	µg/L	0.93	5	M Pattanayek	4/28/2009
Barium	40	µg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	0.14J	µg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.61J	µg/L	0.04	1	M Pattanayek	4/28/2009
Copper	3.4	µg/L	0.38	1	M Pattanayek	4/28/2009
Lead	1.0	µg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	38	µg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	1.7	µg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.13J	µg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	7.8	µg/L	1.9	5	M Pattanayek	4/28/2009

**Lab-Sample Number:** K00002313008  
**Project Name:**  
**Sample Description:** Clinch River TVA Discharge Point  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5A  
**Station No.:** TN0005452 Outfall 002  
**Date/Time Collected:** 04/23/2009 12:09  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 04/23/2009 14:40  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.61 pH Units  
**Chlorine, residual:**  
**Conductivity:** 54 uMHO  
**Temperature:** 15.50  
**Dissolved Oxygen:** 10.37 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002313009

Project Name:

Sample Description: Clinch River mile 4.5 near Sugar Grove Valley R

Sampler Project Name: TVA Ash Spill

Project Site No.: 6

Station No.: CLINC004.5RO

Date/Time Collected: 04/23/2009 12:21

Sampler's Name: Geoff Klein

County: ROANE - 73

Sample Matrix: Water

EFO: Knoxville

Sampling Agency: TDEC-WPC

Billing Code: 327.34-20

Send Report To: TDEC-WPC

Agency Invoiced: TDEC-WPC

Priority Date:

Date/Time Received: 04/23/2009 14:40

Received By: E McCrary

Field Determinations

pH: 8.08 pH Units

Chlorine, residual:

Conductivity: 222 uMHO

Temperature: 14.94

Dissolved Oxygen: 10.61 mg/L

Other:

Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	200	µg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	180	µg/L	6.4	10	M Pattanayek	4/28/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	4/28/2009
Barium	32	µg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.25J	µg/L	0.04	1	M Pattanayek	4/28/2009
Copper	U	µg/L	0.38	1	M Pattanayek	4/28/2009
Lead	0.31J	µg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	36	µg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	1.8	µg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.06J	µg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	2.6J	µg/L	1.9	5	M Pattanayek	4/28/2009

Lab-Sample Number: K00002313009

Project Name:

Sample Description: Clinch River mile 4.5 near Sugar Grove Valley R

Sampler Project Name: TVA Ash Spill

Project Site No.: 6

Station No.: CLINC004.5RO

Date/Time Collected: 04/23/2009 12:21

Sampler's Name: Geoff Klein

County: ROANE - 73

Sample Matrix: Water

EFO: Knoxville

Sampling Agency: TDEC-WPC

Billing Code: 327.34-20

Send Report To: TDEC-WPC

Agency Invoiced: TDEC-WPC

Priority Date:

Date/Time Received: 04/23/2009 14:40

Received By: E McCrary

#### Field Determinations

pH: 8.08 pH Units

Chlorine, residual: 222 uMHO

Conductivity: 222 uMHO

Temperature: 14.94 mg/L

Dissolved Oxygen: 10.61 mg/L

Other:

Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.062J	µg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected